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Integrated Clinical Information System Collaboration Project

PRINCIPAL INVESTIGATOR:  
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CONTRACTING ORGANIZATION:  
Mission Hospital  
Asheville, NC, 28801

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14. ABSTRACT <p><b>Objective:</b> Identify adverse events as they relate to the identification of harm or injury to the patient due to medication administration.</p> <p><b>Hypothesis:</b> CPOE with decision support decreases the probability of adverse events caused by medication administration.</p> <p>The IHI's trigger tool process consists of a retrospective patient chart review completed by a team of nursing staff receiving training and direction from a staff physician. Charts are reviewed using a structured approach to identify significant medication events with harm. Based on the large size, 7,500 each population, of the comparison samples, a convenience sampling methodology should be sufficient to insure randomness. Samples were pulled based on admission or discharge dates from a representative time period for both before and after CPOE implementation. In order to eliminate any seasonal bias, the time periods should be consistent for both samples. With an approximate 3,300 admissions per month, a timed based convenience sample should minimize any other bias as the "population" for that time period will become the sample. Other qualifiers may be included in both samples to exclude certain patient populations from the study. Currently, approximately 6,700 unique charts have been reviewed with 97% of the work completed.</p>					
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## Table of Contents

	<u>Page</u>
Introduction.....	4
Body.....	4
Key Research Accomplishments.....	4
Reportable Outcomes.....	5
Conclusion.....	5
References.....	NONE
Appendices.....	5-6

## **INTRODUCTION:**

The purpose of this study is to identify adverse events as they relate to the identification of harm or injury to the patient due to medication administration.

This project is Phase II in the “Integrated Clinical Information System Collaboration Project.” Phase I of the project included a surrogate measurement for adverse medication outcomes through the collection of data on the number of major contraindicated medication alerts, a high level alert indicates possible serious drug-drug interactions that will likely result in patient harm. Pre-CPOE, only the pharmacist saw these alerts. Post-CPOE the physicians see these alerts initially and are expected to act on them. If the physicians do not take action, the alerts will then be seen by the pharmacist. In the Post-CPOE environment, this dual monitoring system, by physician and pharmacist, is seen as a potential way of reducing potential harmful ADE’s. Although Mission Hospital is assessing mortality rates along with ADEs in Phase I, there was no provision for effectively measuring ADEs in relation to mortality rates. For phase II of this study Mission will use a tool developed by The Institute for Health Care Improvement (IHI). This is a Trigger Tool for identifying ADEs with harm. This tool includes a list of known ADE triggers and instructions for collecting the data needed to assess the number of ADEs per 1,000 doses and the percentage of admissions with ADEs. Mission Hospital obtained permission from the Institute for Health Care Improvement (IHI) to use this tool to assess and compare patient harm due to medication errors pre and post CPOE.

## **BODY:**

Phase II of the Integrated “Clinical Information System Collaboration Project: IHI Trigger Tool” has not been completed. The contract term has been extended to February 28, 2011. The request for this extension was because we underestimated the amount of time each nurse could dedicate to chart review. As we tracked the productivity of our nurse reviewers it became evident that we would have to recruit additional nurses to complete the project. A total of 13,800 were distributed to the nursing staff to review. Ninety-seven percent of the data has been collected and stored. Initial data collected have been examined and compared to determine the validity and reliability. Collection of data will be complete by November 30, 2010.

The proposal for this study included work in progress from Phase I. Data collection for phase I is complete along with a comparison and analysis of data pre and post-CPOE. Dr. Keel is in the process of writing abstracts to submit for publication submission. Deliverables from Phase II include the remainder of data to be collected, a completion report and publication.

## **KEY RESEARCH ACCOMPLISHMENTS:**

Ninety-seven percent of the data has been collected and stored. Initial data collected have been examined and compared to determine the validity and reliability. Collection of data will be complete by November 30, 2010.

**REPORTABLE OUTCOMES:**

None at this time. Research still in progress.

**CONCLUSION:**

No conclusions from "The Integrated Clinical Information System Collaboration Project – Phase II" can be drawn at this time since the data collection is not complete. Chart review and initial analysis from data collected previously are in progress and will be completed by November 30, 2010.

**APPENDICES:****QUARTERLY AND YEAR TO DATE EXPENDITURES:**

Reporting period from 07/01/10 to 09/30/10

PI: James Keel, MD 5. Telephone No. (828) 213-1137

Institution: Mission Hospitals

Project Title: "Integrated Clinical Information System Collaboration Project (CPOE) – Phase 2"

**Current staff, with percent effort of each on project:**

James Keel, MD, PI 50 % Research Nurses 80 %

Karen Roby, Project Manager 80 %

**Expenditures to date (as applicable):**

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